ABSTRACT OF THE DISCLOSURE

A computer program, database and method for the detection of fissile or radioactive material or radiation shielding material in a container works with detection devices brought into proximity to containers so that the presence of fissile or radioactive material, or shielding materials to conceal the presence of such fissile or radioactive materials, may be detected. A comparison may then be made of the output of the detector to a threshold to determine subsequent action regarding the shipping container. The threshold may be based on the output of known, dangerous radioactive materials, known legitimate contents or empty containers.